CLAIMS

1. A method to perform central control of an in-line element (Ei) in a tree-like network by a line terminator (LT) included in said network together with a plurality of network terminators (NT1, NT2, ..., NTi, ..., NTn) of which at least one network terminator is coupled via said in-line element (Ei) to said line terminator (LT) by dedicated a branch and a common branch, respectively,

characterized in that said method includes the steps of:

- determining by said line terminator (LT) a first plurality of bits (A) according to an identification of a selected element (SEL-E) and a second plurality of bits (B) according to an identification of a locally predefined function (SEL-F), said selected element (SEL-E) being selected out of a set of in-line elements comprising at least said in-line element (Ei) in order to execute said locally predefined function (SEL-F); and

- including by said line terminator (LT) in a grant message (G) said first plurality of bits (A) and said second plurality of bits (B);

- forwarding said grant message (G) by said line terminator (LT) to said element (Ei) in order to thereby impose execution of said locally predefined function (SEL-F) according to said second plurality of bits (B) upon said selected element (SEL-E) according to said first plurality of bits (A).

2. A method to perform central control of an in-line element (Ei) according to claim 1, **characterized** in that said step of determining includes comprising in said first plurality of bits (A) any one of a network terminator identifier and a branch identifier, said network terminator identifier identifying one of said plurality of network terminators and said branch identifier identifying at least part of said tree-like network.

3. A method to perform central control of an in-line element according to ~~any one of claim 1 and claim 2,~~ **characterized** in that said step of forwarding includes :

- comprising said grant message in a downstream signal (D(G)); and

- downstream distributing said downstream signal (D(G)) to said plurality of network terminators (NT1, NT2, ..., NTi, ..., NTn) by said line terminator (LT); and

- capturing said grant message (G) out of said downstream signal (D(G)) and forwarding said grant message (G) to at least one element controller (CTRL-E) associated to said element (Ei) in order to thereby impose execution of said locally predefined function (SEL-F) according to said second plurality of bits (B) upon said selected element (SEL-E) according to said first plurality of bits (A).

4. A line terminator (LT) to perform central control of a plurality of in-line elements (Ei) in a tree-like network, said tree-like network including a plurality of network terminators (NT1, NT2, ..., NTi, ..., NTn) being coupled via said plurality of in-line elements (Ei) to said line terminator (LT) by dedicated branches and a common branch, respectively, **characterized** in that said line terminator (LT) includes:

- determining means (DET) to determine a first plurality of bits (A) according to an identification of a selected element (SEL-E) and a second plurality of bits (B) according to an identification of a locally predefined function (SEL-F), said selected element (SEL-E) being selected out of said plurality of in-line elements (Ei) in order to execute said locally predefined function (SEL-F); and

- including means (INCL) coupled to said determining means (DET) to include said first plurality of bits (A) and said second plurality of bits (B) in a grant message (G); and

- forwarding means (FORW) coupled to said including means (INCL) to forward said grant message (G) to said selected element (Ei) in order to thereby impose execution of said locally predefined function (SEL-F) according to said second plurality of bits (B) upon said selected element (SEL-E) according to said first plurality of bits (A).

5. The line terminator (LT) according to claim 4, **characterized** in that said forwarding means (FORW) includes encapsulating means (ENC) to encapsulate said grant message (G) in a downstream signal (D(G)) and to distribute said

downstream signal (D(G)) to said plurality of network terminators (NT1, NT2, ..., NTi, ..., NTn) in order to enable taking in of said grant message (G) out of said downstream signal (D(G)).

6. An element controller (CTRL-E) associated to a selected element (SEL-E) of a set of in-line elements (Ei) in a tree-like network, to impose execution of a locally predefined function upon said selected element (SEL-E) under the central control of a line terminator (LT), said line terminator (LT) being coupled via said set of in-line elements (Ei) comprising said selected element (SEL-E) to a plurality of network terminators (NT1, NT2, ..., NTi, ..., NTn) by a common branch and dedicated branches, respectively, **characterized** that said element controller (CTRL-E) is downstream coupled to said line terminator (LT) and includes recognizing means (RECO) being coupled to an input of said element controller (CTRL-E) to receive a grant message (G) transmitted by said line terminator (LT), said grant message (G) including a first plurality of bits (A) being determined by said line terminator (LT) according to an identification of said selected element (SEL-E) and a second plurality of bits (B) being determined according to an identification of a locally predefined function (SEL-F) of said selected element (SEL-E), and said recognizing means (RECO) is further included to recognize in said grant message (G) said first plurality of bits (A) and said second plurality of bits (B) and to generate upon said recognition a control signal (CTRL(Ei(SEL-F)) for selected element (Ei) in order to thereby impose execution of said locally predefined function (SEL-F) upon said selected element (Ei).

7. The element controller (CTRL-E) according to claim 6, **characterized** in that said selected element (SEL-E) is a switch-able amplifier for amplifying upstream transmitted signals being transmitted by one of said plurality of network terminators.

8. The element controller (CTRL-E) according to claim 6, **characterized** in that said selected element (SEL-E) is a burst mode receiver (BMRX) coupled in said common branch to said line terminator (LT) for reception of upstream signals.

9. A tree-like network **characterized** that said tree-like network includes any one of a line terminator (LT) and an element controller (CTRL-E), said line terminator (LT) being ~~according to any one of claim 4 and claim 5;~~ and said element controller (CTRL-E) being ~~according to any one of~~ claim 6~~, claim 7 and claim 8.~~